

Remarks

This Amendment After Final Rejection only cancels claims and rewrites claims in independent form, thereby raising no new issues. As such, the Amendment should be entered regardless of the disposition of this application. Reconsideration of the rejection is sought as to the claims that are pending after this amendment.

The Examiner has rejected claims 1, 18, 20 and 30 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement, stating that "the claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention," noting that the recitation of transferring a maintenance item via wafer handling motions has no support. Applicant believes that this rejection was made in error. MPEP §2163(B) provides guidelines for rejections based on the written description requirement with respect to new or amended claims and with respect to the original written description. Stated therein, §112, first paragraph, does not require a "in haec verba requirement," rather the claimed subject matter must be supported in the specification through express, implicit, or inherent disclosure so as to convey the subject matter to one skilled in the art. Paragraphs [0006] and [0007] of the specification contain a written description for what is more concisely recited as transferring a maintenance item by wafer handling motions. Applicant certainly had possession of the subject matter described in those paragraphs.

It is believed that the Examiner may have intended some other rejection or objection based on 35 USC §112, second paragraph, with regards to claim terminology because "wafer handling motions" was not found within the specification. However, a claim term that is not used within the specification is not necessarily indefinite if the meaning of the term is discernible. *Bancorp Services, LLC v. Hartford Life Ins. Co.*, 69 USPQ2d 1996, 1999-2000 (Fed. Cir. 2004). The standard is again the person of ordinary skill in the art and whether such person would understand the metes and bounds of the claim language. *Morton Int'l, Inc. v. Cardinal Chem. Co.*, 28 USPQ2d 1190, 1995 (Fed. Cir. 1993).

Nonetheless, to expedite examination of this application, Applicant is canceling these claims and is rewriting their dependent claims, which were not similarly rejected under 35 U.S.C. §112, in independent form. Applicant is further canceling other claims to simplify the issues.

Of the remaining claims, the Examiner has rejected, under 35 U.S.C. §103(a), claims 3-7, 9, 10, 13, 15-17, and 29 as being unpatentable over *Ficnh* U.S. Patent No. 5,085,410 (“*Ficnh*”) in view of *Mooring* et al. U.S. Patent No. 6,267,545 (“*Mooring*”), and claim 14 as being unpatentable over *Ficnh* and *Mooring* further in view of *Gujer* et al. U.S. Patent No. 6,958,098 (“*Gujer*”).

The primary reference, *Ficnh*, discloses a maintenance system for a uranium enrichment system that provides a dedicated component handler system that exchanges portions of an enrichment chamber for maintenance. In the *Ficnh* system, only radioactive material is processed, not semiconductor wafers. The justification for applying *Ficnh* is based in part on the comment in *Ficnh*, at the very beginning of the background section of the patent, identifying systems that employ evacuated chambers for various types of processing requiring a full or partial vacuum. The patent lists electron microscopes, ion-micro analyzers, treatments using materials such as oil, or the “fabrication of electronic components and circuits”. The patent states that, in general, these vacuum systems are utilized for controlling contamination during processing. Then, *Ficnh* devotes several paragraphs to developing the problems to be solved by his invention that are encountered in a uranium separation system, all having nothing in common with semiconductor processing systems. *Ficnh* is cited as disclosing the broad concept of a robotic exchange of internal system components for maintenance without breaking a vacuum. It is an unjustified stretch of reasoning to assert that *Ficnh* renders obvious a system equipped for the exchange of components for maintenance in a semiconductor processing system with wafer handling motions of a wafer transfer mechanism. The standard semiconductor wafer transfer mechanism of *Mooring* is no substitute for the special handling mechanism of *Ficnh*, and would be totally ineffective and unsuitable for handling the casks of the uranium extraction apparatus of *Ficnh*.

Claim 3 recites a maintenance system in which a storage assembly has been added to a semiconductor processing system that stores a maintenance item and an exchange system provided to transfer a maintenance item between the wafer transfer system of the processing system and the maintenance system without exposing the vacuum environment to an outside environment. This combination is not suggested by the applied references of *Ficnh.* and *Mooring.*

Other claims are distinctly different from what is disclosed in the references. Claim 9 recites that the maintenance item is either a ring, a shield, an insulator, an adapter, a baffle, or a plate, of which there is no suggestion in the applied references. Claim 10 recites that a controller is coupled to the processing module and the transfer system and is programmed to control the processing module and the transfer system to replace the maintenance item without exposing the processing module to an outside environment.

Claim 13 recites mounting structure that is configured to move the maintenance item from a mounting position for use during processing into position for pick up by the transfer mechanism. Its dependent claims recite that the maintenance item is an annular ring configured to surround a wafer on a wafer support and that the mounting structure includes a set of lift pins operable to lift the ring into position for pick up by a wafer transfer arm (claim 14), or that the maintenance item is supported within the processing module from the top of the processing module on mounting structure that includes a set of elements that releaseably hold the maintenance item and are operable to lower the maintenance item into position for pick up by a wafer transfer arm (claim 15), or that the transfer mechanism includes a wafer transfer arm and a separate transfer arm configured to pick up a maintenance item (claim 16).

Claim 17 recites that the processing module is either an ALD module, a deposition module, a coating module, a patterning module, a developing module, a metrology module, a thermal processing module, or a cleaning module. No reference suggests providing such a module with mounting structure that removably holds a maintenance item for pick up by a transfer mechanism to transfer a maintenance item by wafer handling motions.

Reconsideration of the rejection of the pending claims is respectfully requested. Should the examiner find that some, but not all, of the pending claims cannot be allowed, a telephone

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conference with the undersigned is requested to arrive at an agreement to amend or cancel claims to place the application in condition for allowance.

The fee for added claims is being submitted herewith. Applicants do not believe that any additional fees are due in connection with this submission. However, if such extension is due or any other fees are necessary, the Commissioner may consider this to be a request for such and charge any necessary fees to deposit account 23-3000.

Respectfully submitted,

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